Estonia—as new EU members and remaining EU countries as old members. **METHODS:** A systematic review of the following databases was conducted: Medline (PubMed), Embase, Cochrane. In addition, NICE, INAHTA, HTAI, and ISPOR Internet pages were searched. The following key words were used: *cost of illness diabetes* with name of a country or *burden of illness diabetes* with name of a country. Studies' design, methods, scope, and results were compared. Direct and indirect costs were considered separately, detailed costs' categories and costs related to complications were distinguished. Perspectives, time frames were taken into consideration and current exchange rates for communication purposes were used. Studies published in English language were included. **RESULTS:** Only 12 studies concerning cost of diabetes type 1 and 2 and their complications in new EU countries were found as compared to 67 from old EU members. On the side of new EU members, one study was found in Lithuania and Bulgaria, three in Czech Republic, and seven in Poland. In old EU countries, one study was found in Luxembourg and Greece, two in Austria, Belgium, Finland, and Ireland, three in France and The Netherlands, seven in Spain and Italy, eight in Great Britain, 13 in Sweden, and 16 in Germany. **CONCLUSIONS:** Results of this review revealed the necessity of carrying out more studies concerning cost of diabetes and its complications in new EU members.

PDB30

USE OF MEDICAL INFORMATION SYSTEM FOR ASSESSMENT OF THE COST OF THERAPY OF DIABETIC FOOT PATIENTS IN RUSSIA

Matveev N[1], Galstyan G[2], Sergeeva S[2], Dolotova D[3]

[1]Nycomed Russia-CIS, Moscow, Russia; [2]Scientific Center for Endocrinology, Moscow, Russia; [3]Russian State Medical University, Moscow, Russia

OBJECTIVES: Diabetic foot (DF) is one of the most important complications of diabetes mellitus. If not treated properly, diabetic foot may often lead to infections, amputations, and finally to disability. Unfortunately, only few studies of the cost of diabetic foot treatment were available in Russia; most of the studies were completed about 10 years ago. We suggested that the data of earlier studies could not reflect present level of expenditures. Therefore, we launched a study of the cost of diabetic foot treatment in present conditions. **METHODS:** We have analyzed the data of 146 inpatients treated in diabetic foot department at Scientific Centre for Endocrinology (Moscow, Russia) in 2008–2009. The patients' data were input into a specially designed medical information system. The patients were sorted into three main groups: 1) diabetic polyneuropathy without diabetic foot (N = 37); 2) diabetic foot without amputations (N = 58); and 3) patients with amputations due to diabetic foot (N = 51). To calculate the total cost of DF treatment, costs of diagnostic procedures, medicines, bandaging, surgical operations, and staying in the hospital were summed. **RESULTS:** Mean cost of treatment of one DF patient was equal to 81,700 rubles (US$2645), which is about 30% higher than previously reported figures. It is mainly due to larger introduction of recombinant insulins into routine treatment of diabetic patients. Mean cost of treatment of DF patients with amputations was significantly higher than in those without amputations, mostly due to additional costs of surgical treatment and longer stay in a hospital. Moreover, the mean cost of medicines for DF patients with amputations was almost twice higher than for DF patients without amputations. **CONCLUSIONS:** The cost of diabetic foot treatment in Russia increased approximately 30% during last 10 years. The results will be used to assess cost-effectiveness of various drug treatments of diabetic foot.

PDB31

THE IMPACT OF NEUROMONITORING ON THYROID SURGERY COSTS

Beccagutti G[1], Grifi M[1], Pantaleoni M[2], Dionigi G[3]

[1]Medtronic Italia, Sesto San Giovanni, Italy; [2]IMS Health S.p.A, Milano, Italy; [3]Università dell'Insubria, Varese, Italy

OBJECTIVES: Damage to the recurrent laryngeal nerve (RLN) is one of the principal reasons for malpractice claims against surgeons in otorhinolaryngology. Intraoperative neuromonitoring (IONM), facilitating the identification of RLN, has been demonstrated to be a valid technical support to reduce intraoperative risks. Aim of this study was to evaluate the additional hospitalization costs for thyroidectomy due to IONM, against the mentioned clinical and administrative advantages. **METHODS:** The study was performed in an experienced Italian University Hospital, in which the learning curve for this technology is considered completed. Through a microcosting approach, the thyroidectomy patient care process (with and without IONM) was costed considering direct costs only (staff time, consumables, equipment, drugs, operating room, and general expenses) and according to the hospital perspective. Unit costs were collected from hospital accounting and standard tariff lists. a differential analysis was performed to highlight additional resource consumption (time effort, consumables, technology equipment) due to IONM usage. To assess the impact of the technology on hospital management, three scenarios were considered: 1) traditional thyroidectomy; 2) thyroidectomy with IONM in a high-volume setting (five procedures per week); and 3) thyroidectomy with IONM in a low-volume setting (one procedure per week). **RESULTS:** The cost for hospitalization for a traditional thyroidectomy was €3471. If IONM is used, costs increase as follows: +7% in a high-volume setting (€3713) and +9% in a low-volume setting (€3770). IONM therefore represents only the 6% to 7% of the total hospitalization costs. **CONCLUSIONS:** IONM for thyroid surgery could reduce the risk of RLN damages and of the consequent malpractice claims against a very low impact on hospital budget, accounting only for the 7% of the hospitalization costs for a thyroidectomy. Considering that IONM could be useful in all surgical procedures where nerves are at risk, the economic impact could be even lower due to a higher level of usage of the equipment.

PDB32

COST-EFFECTIVENESS CONSEQUENCES OF OBESITY IN T2DM BY INSULIN ANALOGUE THERAPY

Józsa Z[1], Tóth E[2], Nagy B[2]

[1]Novo Nordisk Hungary Ltd., Budapest, Hungary; [2]Healthware Ltd., Budapest, Hungary

OBJECTIVES: The available T2DM (type 2 diabetes mellitus) therapies attend with weight gain, which affects for the disease outcomes in a very extent way. Weight gain could worsen the long-term effect of insulin therapy (increased risk of insulin resistance, hypertension, dyslipidemia), which influences the total treatment cost. Long-acting insulin analogue therapies (insulin detemir and glargine) offer improved pharmacokinetic and pharmacodynamic properties compared to regular human insulin. In a previous meta-analysis, detemir caused significant lower weight gain than glargine (–2.04 kg after 6 months therapy). Our research aimed to determine the effects of weight gain and calculate the total treatment cost. **METHODS:** On the basis of a systematic literature review, we found many consequences, which could be obesity related. Because of its important effect and bride prevalence, we analyzed the CHD (coronary heart disease) risk changes related to the weight gain. We modified the 10 years risk—calculated with the UKPDS risk engine—with the effects of the weight gain published in a meta-analysis. We aggregated the differences in natural outcomes (number of avoided fatal and nonfatal events) and in monetary unit, based on real-world data. **RESULTS:** In our analysis, we assessed that insulin detemir-treated patients—due to the favorable features regarding weight gain compared to glargine—experience smaller (cca 2%) CHD risks. It means, for the current treated Hungarian population, that there are 223 coronary (158 fatal of this) events avoidable in 10 years horizon using detemir insulin instead glargine. The estimated savings of social insurance would be around 224 million HUF on the basis of a Hungarian burden of diabetes complication study. **CONCLUSIONS:** Obesity and weight gain-related aspects should be priorized as the main international tendencies showed. It is not only necessary on the policy level, but also in "individual" level in the cost-effectiveness analysis as well.

PDB33

EVALUATION OF COST AND CLINICAL OUTCOMES BY HBA1C AT DIAGNOSIS USING VARIOUS DIABETES TREATMENT STRATEGIES

Lee LJ[1], Klein RW[2], Klein TM[2], Furiak N[2], Peltz G[1], Bansal M[2], Jackson JA[3], Juneja R[4]

[1]Eli Lilly & Company, Indianapolis, IN, USA; [2]Medical Decision Modeling Inc., Indianapolis, IN, USA; [3]Lilly USA, LLC, Indianapolis, IN, USA; [4]Indiana University, Indianapolis, IN, USA

OBJECTIVES: To examine the association of HbA1c at diagnosis with cost and clinical outcomes in patients with type 2 diabetes (T2D) using three different diabetes treatment strategies. **METHODS:** An existing Monte Carlo diabetes model was used to generate demographic and clinical characteristics for 10,000 random patients simulated from the time of T2D diagnosis. Fixed initial HbA1c values were assigned (range: 7–12%). Input distributions were derived from the literature, with diabetes complications occurring in: retinopathy, nephropathy, neuropathy, coronary heart disease, and stroke. The diabetes-related costs, percentage of patients reaching HbA1c target (<7%), complication events, and mortality over 10 years were evaluated using the following treatment strategies: (S1) addition of oral antihyperglycemic agents (OHAs) at 3-month intervals then starting insulin after 9 months; (S2) addition of OHAs at 6-month intervals then starting insulin after 2 years; and (S3) addition of OHAs only. All treatment strategies began with metformin then sulphonylurea and/or thiazolidinedione were added if target was not reached. **RESULTS:** Diabetes-related costs increased as initial HbA1c increased for all three strategies. S1 had the greatest increase ($5300–$7750) followed by S3 ($4200–$5250) per 1% HbA1c increase from 7% to 10%. S2 had the smallest rate of increase ($3350–$4950). S3 was the least costly until HbA1c exceeded 10%; however, even at HbA1c of 8%, S3 had fewer patients ever reaching target (S3 = 79% vs. S1 and S2 = 95% [standard errors, SE < 0.41%]). For 10,000 patients with initial HbA1c of 9%, the total counts of complications were: S1 = 4360; S2 = 4126; S3 = 5009 (SE < 67) with mortality rates of 42.5%, 41.9%, and 45.2% (SE < 0.56%), respectively. **CONCLUSIONS:** In this model, S2 had the lowest complication rates and mortality in patients with T2D. Starting HbA1c affected S1 cost more than other strategies. Strategies with other treatments or alternative timing strategies can be specified and analyzed using this model.

PDB34

THE ECONOMIC VALUE OF THE EASYPOD® ELECTRONIC AUTOINJECTOR IN IMPROVING THE RESPONSE TO GROWTH HORMONE (GH) IN CHILDREN WITH IDIOPATHIC GROWTH HORMONE DEFICIENCY (IGHD): A COST-CONSEQUENCE ANALYSIS

Chatelain P[1], Latour S[2], Maetzel A[3]

[1]Université Claude Bernard Lyon—Hôpital Femme Mère Enfant, Bron, France; [2]Merck Serono S.A., Geneva, Switzerland; [3]Stratas Partners, Basel, Switzerland

OBJECTIVES: Response to GH therapy in children with IGHD can be further optimized. To evaluate the economic benefit of injecting GH with easypod®, an electronic autoinjector that objectively monitors drug administration, enabling differentiation of poor adherers from low responders. **METHODS:** A discrete event simulation model was developed to model continuous, intermittent (four injections/week) and discontinued GH usage in children with IGHD until final height. a cohort of children (age: 4–12 years, growth delay: –4.0– –2.5 standard deviation scores [SDS] at baseline) was modeled to initiate GH (0.03 mg/kg/day). Annual height gains of 1.2 to 0.8 SDS in year 1 were assumed to be 30% and 60% lower in each subsequent year of continuous and intermittent use, respectively. Baseline nonadherence was 9.3 persons per 100 person-